

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 5 (previously presented): A storage system for extracorporeal storage of an organ, said storage system comprising:

an organ perfusion chamber for storing an extracorporeal organ, said organ perfusion chamber having a wall with connectors for connecting to said extracorporeal organ;

a vitality-preserving fluid circuit for circulating a vitality-preserving fluid into through said extracorporeal organ stored in said organ perfusion chamber, said vitality-preserving fluid circuit including a dialysate circulation system that circulates a dialysate for dialyzing said perfusate and a perfusate circulation system that circulates a perfusate for perfusion of said extracorporeal organ; ~~said vitality-preserving fluid circuit including a dialysate circulation system and a perfusate circulation system;~~

a storage fluid that is stored in said organ perfusion chamber, said storage fluid being said dialysate; wherein said organ perfusion chamber also serves as a reservoir for said dialysate, said dialysate flowing from said organ perfusion chamber into said dialysate circulation system; and , wherein said storage fluid is a dialysate and wherein said organ perfusion chamber also serves as a reservoir for said dialysate, said dialysate being a component of and integrated into said dialysate circulation system as needed; and

a protective ~~sack~~ cover in said organ perfusion chamber that encloses said extracorporeal organ within a space defined by said protective cover and a portion of

said wall of the organ perfusion chamber with said connectors, wherein said protective cover provides adapted to receive said organ in said organ perfusion chamber and to provide a complete barrier between said organ and said storage fluid;

wherein said organ is maintained by said storage fluid in a floating state inside said protective cover. ~~in said organ perfusion chamber.~~

Claim 6 (previously presented): The system of claim 5 further comprising a temperature control device for controlling temperature of said storage fluid in said organ perfusion chamber.

Claim 7 (previously presented): The system of claim 6, wherein said temperature control device is a heating mat.

Claim 8 (previously presented): The system of claim 6, said organ perfusion chamber having a wall and wherein the said temperature control device is integrated into said wall.

Claim 9 (previously presented): The system of claim 8, wherein the temperature control device comprises temperature-control loops embedded into said wall of said organ perfusion chamber.

Claim 10 (previously presented): The system of claim 5, wherein said organ perfusion chamber is hermetically sealed against fluid and pressure.

Claim 11 (previously presented): The system of claim 5, wherein said protective sack is an impermeable plastic bag.